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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,975	01/23/2001	Stephen P. Williams	Q01-1000-US1	2314

7590 07/13/2004
Steven G Roeder
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EXAMINER

BLOUIN, MARK S

ART UNIT PAPER NUMBER

2653

DATE MAILED: 07/13/2004

24

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/768,975

Applicant(s)

WILLIAMS ET AL.

Examiner

Mark Blouin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,9-11,13 and 22-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,9-11,13 and 22-75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Detailed Action

Continued Examination Under 37 CFR 1.114

- A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 14, 2004 has been entered.

Response to Amendment

- The reply filed on June 14, 2004 was applied to the following effect: Claims 6,22,37,50,59, and 67 are amended and Claim 75 is newly added.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 6,9-11,13, and 22-74 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu et al. (USPN 6,514,627).
3. Regarding Claims 6,9-11,13,22,37,40,50, and 59, Shimizu et al. shows (Figs. 1-4) head stack assembly for a disc drive including a storage disc (Fig. 1), the head stack assembly

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comprising an actuator arm , a coarse positioner that moves the actuator arm relative to the storage disk, a transducer assembly including a load beam (1), a flexure (2) secured to the load beam, a data transducer (3) secured to the flexure (2), a separately formed base plate (4) securing the transducer assembly to the actuator arm, and a fine positioner (piezoelectric elements,(9)) secured directly to the base plate, the fine positioner moving a portion of the base plate relative to the actuator arm, wherein the base plate further comprises a positioner cavity (Fig. 2) that receives the fine positioner, the proximal and distal ends are secured under compression, a flex section (41) positioned adjacent to the positioner cavity, the flex section allowing the base plate to flex, a pair of spaced apart positioner cavities (Fig.2) that receive the fine positioner , a pair of flex sections that allow the base plate to flex, wherein the positioner cavities are positioned between the flex sections, wherein the flex sections are positioned between the positioner cavities, wherein the fine positioner moves the transducer assembly substantially transversely relative to the actuator arm, further comprising a control system (Fig. 5) that directs current to the coarse positioner to move the actuator arm so that the data transducer is positioned near or on the target track and directs current to the fine positioner to selectively move the base plate so that the data transducer is positioned and maintained on the target track during rotation of the storage disk, wherein the fine positioner is a piezoelectric motor (9).

4. Regarding Claims 23-27,43,44,45, 53, 54, 57, and 60-64, Shimizu et al. shows (Figs. 1-4) the base plate includes a pair of flex sections(41) that allow the base plate to flex, and wherein at least one or each of the piezoelectric motors is positioned substantially between the flex sections, and at least one of or each of the flex sections are positioned between the pair of piezoelectric

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motors, wherein at least one of the piezoelectric motor(s) do not contact either of the flex sections.

5. Regarding Claims 30,31,41, and 42, Shimizu et al. shows (Figs. 1-4) the base plate includes a plate mount (4) that secures the base plate to the actuator arm, wherein one of the piezoelectric motors, positioned parallel to each other is secured to the base plate substantially between the plate mount and the data transducer.

6. Regarding Claims 32,39,51,52,65,66, and 73, Shimizu et al. shows (Figs. 1-4) at least one of the piezoelectric motors includes a proximal end and a distal end, and wherein only the proximal end and a distal end are the only portions of at least one of the piezoelectric motor that contact the base plate secured to the base plate under compression.

7. Regarding Claims 33,34,35,36,46-49,55,56,58, and 71, Shimizu et al. shows (Figs. 1-4) the flex section (41) that cantilevers away from the plate side and is substantially "U" or "V" shaped.

8. Regarding Claims 67-70,72, and 74, are drawn to a method of retrieving data from a target track on a rotating storage disk of a disk drive using the aforementioned apparatus. The limitations of the method claims are met and are anticipated by Kahn et al. when the apparatus operates.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claim 75 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (USPN 6,514,627) in view of Ohwe et al (USPN 6,594,116).

11. Regarding Claim 75, Shimizu et al shows all the features described, *supra*, but does not show a load beam where the base plate, which Shimizu shows to be about 0.15 to 0.3 mm (Col. 4, lines 11-12), is at least approximately three times the thickness of the load beam.

Ohwe shows (Col 3, lines 62-63) that a load beam can be of a thickness ranging between 0.02 to 0.08 mm, which when combined with Shimzu et al, would make the base plate at least approximately three times the thickness of the load beam.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the base plate of Shimizu et al with the load beam as taught by Ohwe et al. The rationale is as follows: One of ordinary skill in the art at the time the invention was made would have been motivated to combine the base plate of Shimizu et al with the load beam as taught by Ohwe et al in order to improve positioning accuracy by the increased damping effect of the thicker base plate.

Conclusion

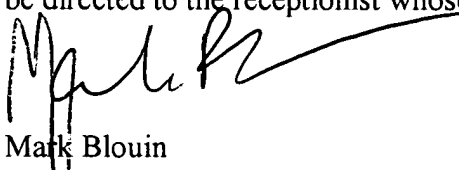
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimizu et al (US 6,614,627 B1) cited to show a load beam with the base plate holding piezoelectric elements and separate from the flexure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Blouin whose telephone number is (703) 305-5629. The examiner can normally be reached M-F, 6:00 am – 3:30 pm.

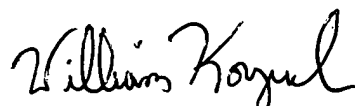
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If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, William Korzuch can be reached at (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314 for regular and After Final communications.

Any inquiry of general nature or relating to the status of application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



Mark Blouin
Patent Examiner
Art Unit 2653
July 8, 2004



WILLIAM KORZUCH
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